

VOL. XII.

BISBEE, ARIZONA, SUNDAY MORNING, MAY 9, 1909.

NO. 109

WARREN DISTRICT CONTINUES  
IN OLD PROSPERITY GROOVE

Copper Situation is Showing Improvement, According to Advances from the East—Surplus Stock Shows Decrease for April—Production From Warren District Slightly Less Than for Month of March—Workings in Denn Show Favorable Indications—Shattuck's Ore Body On Six Hundred Level

While there is nothing of special importance to relate concerning the operations in the Warren district, still the general conditions are reported to be entirely satisfactory. Encouraging news have been received during the week from the financial and metal centers in the east. The price of copper has had a slight advance and the feeling seems to be general that it will now continue on the up grade. The report of the Copper Producers' association on the production and deliveries for the month of April is expected next Monday, according to advices. Advance information on this forthcoming report is to the effect that it will show a reduction in the surplus stock of copper on hand in this county for the first time during the year. According to the reports of this association for January, February and March the surplus copper stock was increased during these months \$9,922,629, beginning with an increase of 21,772,579 in January and ending with an increase of \$9,954,454 in March. The figures for April are expected to be approximately an actual decrease in the surplus for that month, with a production of \$110,000,000 and deliveries of \$112,000,000.

Locally ore production remains at about what it has been during recent months. The number of men employed in the mines of the district is approximately 4,000 and the question of curtailing the ore production or the forces have never been even considered. This information comes from the highest authority and is emphasized here because of a good many silly reports recently concerning the probability of laying off men by this company or that and to the effect that ore production is to be materially reduced. Such idle reports are dangerous and cruel to those dependent on employment. It is safe to say that if any purpose of the kind was agreed on it would be made known by those in authority.

## THE COPPER QUEEN.

The Copper Queen reduction works produced approximately 8,250,000 pounds of copper during April, about 250,000 pounds less than the March production. Seven blast furnaces are in commission and the May reduction will not vary far from that of April. Ore production is practically the same now as in April. The work of connecting all the Queen shafts with the Sacramento hoist is being continued in many places. Extra effort is being exerted in hurrying a connection between Sacramento and the Lowell at the 1400-level. This drift is being pushed both from the Lowell and from the Sacramento. To still further facilitate this work a winze is being sunk midway between the two shafts from the 200-level. When the winze reaches the 1400-level then work will be started each way from it on the connecting drift. A double service electric hoist is being installed at the 1200-level of the Sacramento for the purpose of hoisting the rock from the 1400 drift and from the shaft which is to be cut to the 1600 level. When the Sacramento shaft reaches the 1600 level it will be below the bottom of all other Queen workings in the district and at that depth will serve its purpose for a long time. At the Spray shaft a reboiler is being installed for supplying compressed air at that shaft for hoisting which will do away with the necessity for the former boiler plant which will be dismantled.

## THE DENN.

The new crosscut started north in the Denn last week has proceeded sixty feet and is now in prospecting ledge matter, yellow altered lime and oxide of manganese, carrying a trace of copper. This drift is going under the hill in the opposite direction from the Junction. The present indications are such as to cause a buoyant feeling of confidence on the part of the controlling owners, who hope that important results may be announced in the near future.

## WILL ENDEAVOR TO SIZE UP TAFT

WASHINGTON, May 8.—By this time next year the country will begin to agitate itself in an endeavor to find out how big it is. Taking the census once every ten years is a serious job in a nation where the population is mounting up towards 100,000,000 and where the land area on the continent alone approximates 2,000,000 square miles. As the country settles up it becomes easier to take the census, but it is a huge job at best, even with the use of modern tabulating machines and under an organization which has made the census bureau permanent. The census has therefore produced much more accurate statistics of the population and social and business conditions.

Congress has been disturbing itself over an effort to secure certain patronage spoils in the taking of the census, but the actual work will be completed along well understood lines and within a few months of the actual enumeration. The total population of all the states and territories will be known, and Congress will thereafter undertake the work of distributing representation among the different states in the house of representatives.

## Experts Disagree on Estimates.

Experts disagree as to what the new figures will show and they will probably continue to disagree until after the census is actually taken. The continental United States will probably show a population of above 85,000,000 and below 90,000,000 people. Nobody knows what the ratio of increase is. It varies sometimes in the most inexplicable way. During a prosperous period immigration is stimulated and the population grows rapidly; but this is frequently offset by some mysterious decrease in the

Estimate of the value of the ore in the Shattuck block on the 600-level places it at not less than \$1,750,000. No crosscut on the 700-level is now being run to cut this fault or ore body at this level. The value of the ore developed on the 600 is placed at not less than 15 per cent copper.

## CALUMET &amp; ARIZONA.

The event of the past week in Calumet & Arizona and Superior & Pittsburgh circles was the moving of general office headquarters from the old location of the Oliver shaft to the splendid new office building at Warren. All the heads of the various departments are now comfortably settled in their new quarters. All the old office building as the Oliver shaft is to be torn down, except the one formerly occupied by the engineers. In this building the mine foreman and assistants will have their headquarters in the future.

As to the mine work of these companies there is nothing to report for the past week. The output at the smelter was slightly less for April than for March, but the output of ore and the force employed remains at practically the normal since the beginning of the present year. Development work in the lower levels continues to bring most satisfactory results.

## PLATINUM AT SYLVANIE.

Fred Bend is in Bisbee from Sylvanite and brings the news of a reported discovery of platinum. This platinum was discovered by a Denver assayer in testing the value of an ore sample sent him by Hughes and Henley, owners of claims in the Sylvanite district. The assay showed that the sample carried platinum to the amount of one ounce to the ton. This is a very rare metal and its value is about five times that of 14-carat gold. Only 400 ounces of this metal was produced in the United States in the year 1906.

SATISFACTORY  
IS MINE WORK  
AT TOMBSTONE

Additional Ore Bodies in Properties of the Tombstone Consolidated.

ANNUAL MEETING OF  
ARIZONA MINES COMPANY

Philadelphia Capitalists Arrive to Start Extensive Work in Johnson District.

TOMBSTONE, May 8.—The development work on the properties of the Tombstone Consolidated company's property during the past week has been more than satisfactory and considerable headway has been made in the projected plans for the year. A large new compressor which has been ordered is expected to arrive soon and will be installed at the jump shaft to furnish power for the drills that are being used and the drills that are to be installed on the 1000-foot level. The work of preparing for the installation of the oil burners at the West Side is about completed and it is expected that a change can be made in the fuel within a short time now. The work at the Tribune, West Side, Northwest and Silver Thread has resulted in additional ore bodies being uncovered up while and concentrated at the concentrator.

## To Attend Stockholders' Meeting.

Fred C. Eckhart of Ft. Wayne, Indiana; Frank Falke, of the same city, and C. L. Wright of Webb City, Missouri, arrived here yesterday to attend the meeting of the stockholders and directors of the Arizona Mines company which is to be held in this city on Monday next. Other stockholders from out of town are expected to arrive tomorrow and Monday. The company is the owner of a number of claims in the South Pass district about eleven miles northeast of here as well as the Gringo property at Patagonia. J. J. Wyatt is general manager of the property and will be able to present a first class report of the operations of the company during the past year to the stockholders and directors.

## On Way to Properties.

Nelson A. Brown and A. C. Harmer, prominent Philadelphia capitalists arrived here last evening on their way to Johnson, where they are interested in a number of claims. Mr. Brown has the honor of being the sheriff of the district of Philadelphia and is a prominent politician in that city. The gentlemen are the heaviest stockholders in the Arizona United Mines company which owns a group of fifteen claims in here for the purpose of starting some extensive development work on the property. While in the city they were in consultation with attorney Chas. Bowman, who is the legal representative of the company in this section and he expects to return in company with the two gentlemen to visit the property within the next few days.

## Made Another Payment.

Representatives of the Calumet & Arizona and Superior & Pittsburgh companies arrived here yesterday and as a consequence a well known Tombstone fact is that the Calumet & Arizona United Mines company has made the second payment on the Poorman mine which the company has an option on in the Courland district. The bond for the property calls for the sum of \$50,000 of which amount Mr. Wnekros has received to date \$15,000, the other \$35,000 having been paid at the time the option was taken about six months since. The balance of the money is due in other payments covering about twelve months.

## Receives Deed from Sheriff.

There has been filed in the county recorder's office during the past week a deed from John F. White, a sheriff to N. L. Amster, a deed which conveys to the latter the Copper Belle group of claims in the Gleason district. The deed completes the sale of the property as the satisfaction of the judgment that was rendered against the property in the sum of some eighty thousand dollars that was obtained against the company by Martin Cortello, on account of a mortgage held by him. When the property was ordered sold at sheriff's sale about nine months since the property was bought by Mr. Marsden and at that time \$25,000 was given a certificate of sale, and the full nine months has elapsed and there has been no redemption on the part of the parties interested and the law is empowered to deliver the deed for the property. There is now but little chance of further litigation over the property and it will eventually become a very valuable asset to the holdings of the Shannon Copper company, who has been working it under lease for several years.

## LARGE ORDER FOR COPPER.

The Pennsylvania Railroad placed with the Standard Underground Cable company of Pittsburgh one of the largest orders the company has ever received for underground copper cables.

## GOLD EXPORTS.

NEW YORK, May 8.—Engagements of \$1,000,000 in gold bars have been made at the assay office for shipment to Paris tomorrow. The National bank takes \$500,000 and Goldman Sachs & Co. \$500,000.

At no property visited by the editor of Iron Ore have such pronounced changes been effected in the mine as at the mine of the Greene Cananea company, located at Cananea, State of Sonora, Mexico. From this it may be judged that at no other was there opportunity for betterments, but while this is in a measure true, the very reason for the changes is that the mine was in a measure abandoned at the time of the former conditions. Col. W. C. Greene, at the head of the old organization, began at the grass roots. At the outset he did not realize just how vast an enterprise he was to bring from the ore that outcropped at this location. He began in a new way, as he believed a person of ordinary prudence. He had first to prove the value of his mine. The nearest reduction works were some distance away, in the state, and his first shipments were made by bull teams. A few holes blasted in the ore, where they could be hoisted to a smelter. It was not a business demanding expensive mine hoists or concentrating works. Instead a lot of Mexicans were employed with picks and shovels and wheelbarrows. A few holes blasted in the prominent crumpled ore enough to easily keep the bull teams moving. They were not a very rapid means of locomotion. The colonel was feeling his way.

## Mine Was Developed Rapidly.

Gradually, but still faster than he really anticipated, the mine grew, railroad facilities, after much hard planning and figuring, were obtained and machinery was brought in to swell the output from the mine. Later followed concentrators and smelters, these being of the type common to the mines and accepted as the best there were to be had. The colonel was anxious to get his enterprise moving and to returning something for the capital that had been put into it. Copper was selling at better prices than now, ores were better, the surface and were very rich. The initial plan was to develop the mine in a number of short cuts, but the conditions they met in the mines, he knew the work points in the plant and he was looking for skilled men to put in charge but men of that stamp were probably not looking for a job in a mine. He was looking for men who would be willing to work for him, and he was looking for men who would be willing to work for him, and he was looking for men who would be willing to work for him.

## Surface Shows True Picture.

One who has not visited the property for a year past is attracted by the many changes that appear on the surface. At the receiving end, where the ore comes from the concentrators, a long line of ore bins having been added to the former number. These bins have a capacity of between 500 and 1,000 tons, have hoppers at the bottom from which the charge is automatically released, as desired, the ore going into a shaker feeder mounted on a rail and worked along the line under the hoppers as desired. This shaker feeder drops the ore upon a Robins' conveying belt, which takes them to their destination, the bedding yards. The ore of these bins are carefully assayed before being sent to the yard, and should they lack in iron, lime or other elements demanded for perfect operation in the smelter, the bins are supplied, so that when the beds in the yard are filled they are made up of perfect furnace charge. The bins are worked by hand and need very little in the way of labor to prepare. The shaker feeder is mounted on a carriage astride of the conveyor and with a prearranged pan under its discharge opening, so placed as to prevent any flow of ore over it unless it is in motion. Its stroke and inclination are adjustable as is also the size of the outlet of the hopper.

## The Ore Bedding Arrangement.

The ore bedding yard contains three ore beds, when filled, these being long, of triangular cross section, and each holding about 8,000 to 10,000 tons of ore. These beds, as we have stated, are uniform in their composition and physical characteristics through their entire length. From overhead the automatic traveling ore tipper, or shaker, delivers the ore, iron, lime, etc., in the proportions needed for the furnace charge, effecting a very even mixture, this work being continued, layer upon layer until the bed is full, extending at the bottom to channels, now the local organization has been very busy in the right direction accomplishing wonders, and putting the enterprise in shape for the keenest competition in its line. There have been no successful competitors by the officers of the company which amount annually to a considerable sum, and permitting activity even in these times when the market is lamentably low. Combined with the savings in the plant it means much to the company.

## Big Compressor Getting Ready.

At the time of our visit the foundation for a big air compressor was receiving its finishing touches. The boilers were on the ground, and the compressor was at Naco, Arizona, waiting shipment across the international line. This compressor will furnish 6,000 cubic feet of free air and will replace many smaller plants located at different points about the

## Complete Revolution in Manner of Operation at the Great Sonora Copper Camp—Dr. Ricketts Has Effected Enormous Saving By New and Economical Methods—How Col. W. C. Greene Brought Cananea Into World Of Prominence Beginning at Grass Roots

The plant of a year ago may look antiquated today, so rapid do some things come along, so it was not at all surprising that Greene Cananea could have been improved. The change in management carried with it the very best brains in the mining world, men whose life had been devoted to the industry. Very naturally they brought with them something in the way of ideas, and these have been put into practice, the result attending them being of a highly satisfactory character. His Splendid Organization. The splendid management of the Greene Cananea company were highly fortunate in being able to secure the services of Dr. L. D. Ricketts to look after their affairs in Cananea and other points. He unquestionably stands at the head in his profession and his work has been a long time of successes. He not only possesses rare skill in all that goes to make the miner, metallurgist and business man, but he has wonderful powers of organization. Thus we find today a splendid executive body at Cananea, and all working in perfect accord and with great enthusiasm in their respective branches. Every Saturday night there is a meeting of the heads of the various departments at which there is discussion of important topics concerning the mining, concentrating, smelting and many other things associated with such a great enterprise as this. These weekly meetings are looked forward to with much interest by the members, and each is bringing his brains to present something that will be of value in the general scheme, which is the lowering of costs and great good has followed this friendly opening of minds, every member contributing criticism of his particular branch. All take pride in their accomplishments, as they have good reason to, the gains having been substantial and permanent with the end not yet reached in this desired direction. The company has in Dr. Ricketts a man who does things, who has the greatest respect of his associates and all the people, and who delights in the knowledge that he is appreciated. He has to perform much to meet the expectations of his friends.

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## Big Saving of Labor.

The same smooth delivery is noted at the mouth of the furnaces where the charge is automatically delivered into hoppers connected with the stacks. Here the ore may be run directly into the furnaces or on the feed floor in front, according to the needs of the tenders. The coke is handled with equal facility. There is being handled a tonnage of about 70,000 monthly from the mines, of which about 30 per cent is direct smelting, the balance being concentrated. This volume is carried on those endless belt conveyors easily. Giving the reader some idea of the saving of men on the feed floor alone, he has touched one another in their movements, and where eleven boilers were worked to ten capacity to provide the needed steam, is now a very quiet room, only three out of the former eleven boilers being in operation. Not only does the reverberatory lessen the cost of treating the fines and dust, but it creates a wonderful energy for the waste gases, providing, as we have stated, 1,000 engine horse power to be used in driving the machinery of the new plant. It can be seen at a glance that this amounts to a very large sum daily in the operation.

## Entire Change in Smelters.

The old smelter plant of the Greene Cananea has been entirely replaced with new work. Even the old steel building containing the former equipment has been in part removed, sections torn away and replaced so as to better the light and ventilation. There are eight new furnaces, six of which are in operation and producing more copper than the old eight. There are five stands of converters which are new, twenty new shells, a new feed, feeding devices, slag pots, induction doors of the new plant. The converter runway and cranes have been rebuilt. Shells are handled by electricity, one operator controlling the work of this class in the entire room. The McDougal roasters have been completed and furnish sufficient capacity to add to the fine dust to bring the reverberatory up to its capacity. Due to these improvements the daily pay roll at the smelter has been reduced about \$11,600, which is a very big saving, and indicates the economies being introduced. Of the monthly saving in all departments, mining, milling, smelting, etc., it will run much above \$100,000 a month, so the local organization has been very busy in the right direction accomplishing wonders, and putting the enterprise in shape for the keenest competition in its line. There have been no successful competitors by the officers of the company which amount annually to a considerable sum, and permitting activity even in these times when the market is lamentably low. Combined with the savings in the plant it means much to the company.

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surface. Air will be sent to the mines as far as the Capote, and the 10-inch main was already laid along the route waiting to be coupled up. It is estimated that a saving of fifty per cent in the present cost of supplying air will be effected which will be important. The service will also be much better as there will be plenty of pressure for the drills and other purposes even at the well as upon the smaller lines of the new compressor is a fine one of roomy and substantial character, and constructed by men employed about the mines where there are many skilled mechanics in this line. The Mexicans are working in granite and concrete work, and some of the finest dry and wet walls seen anywhere are found in their country. The concrete is made under well known formulas, and is of the very best. The task of installing the new compressor will soon be finished.

## Scrap Piles Are Classified.

There's a system observed in the conducting of affairs of the Greene Cananea that is refreshing. Even in the matter of scrap was noticed that it was selected and placed, certain classes by themselves, where the could be easily reached and stock secured without pulling over a great mass of stuff. In the tearing down of the old plant a great deal of material was obtained that will be valuable for years to come in and about the property. A scrap yard has been established and is properly handled, as we have described. The very poor scrap will be held to be used in reprecipitation plants.

## Oil Used for Fuel.

Where oil is being used for fuel there is a complete system of tanks and piping, with plainly marked gauges to show the consumption, these being both upon the main supply tanks as well as upon the smaller delivery tanks for the several uses to which it is put. In this way a very close checking of the consumption can be made, and accurate figures made showing the cost, and arriving at conclusions as to the difference in value between oil and coal. There seems to be some variance of opinion as to the efficiency and real cost of the two fuels and it will take a little time to get the figures straight. To gain information that means something the local management is conducting its test in a sensible, practical way.

## In the coke stock yard an auto-

matic water sprinkler has been provided that will come into operation at any time. This prevents any early combustion in the furnace and also lessens the danger from fire and waste in the pile.

## A new foundry and machine shop

are making big betterments at the plant. The foundry was a necessity, there being a duty on castings, but none on pig iron and the making of parts that are frequently duplicated and replaced means considerable expense. The new foundry is being carried on here in the main department, and where eleven boilers were worked to ten capacity to provide the needed steam, is now a very quiet room, only three out of the former eleven boilers being in operation. Not only does the reverberatory lessen the cost of treating the fines and dust, but it creates a wonderful energy for the waste gases, providing, as we have stated, 1,000 engine horse power to be used in driving the machinery of the new plant. It can be seen at a glance that this amounts to a very large sum daily in the operation.

## At the new mill, designed a few

years ago by Dr. Ricketts, they have completed the second section. In the old mill a new and heavier engine has been installed, and two new mills of the Chilian type, developed by Mr. David Cole, in charge of this department, and who is also the able first assistant in the fines department where they are doing excellent service. Mr. Cole has also improved the old rolls by his special patent and which are manufactured at home. At the old mill a new foundation has been put in, of stone, replacing the unsound timbers of the former construction. Formerly the water to supply the concentrators was brought from Capote and Indiana-Sonora mines, but the stoppage of pumping at these places necessitated a new supply, consequently a main was laid from the Cananea Dalah through which water was lifted to tanks at the Cobro Grande, from which later point it comes to the works by gravity. This line has a length of 6,000 feet and is made up of 12 and 10-inch pipe. Water is also being lifted from the main artery 12,000 feet below the concentrator by electric pump. From this line 250 gallons of water are being delivered per minute, at a cost of 6 cents per 1,000. Water has also been developed in Puertoelton creek by a bed-rock tunnel of 40 feet, led by a steel flume 5,285 feet long over the divide. A wood pipe line 12,000 feet in length connects with this flume leading the water by gravity to the sump tanks at the concentrator. Thus it will be seen that a very large expenditure has been made for the securing of a stable and sufficient water supply. All the cost has been charged to the concentration of the ore and makes this item particularly high at this time. With the cost charged off there will be a much better showing in this branch.

## Eight Aldrich triplex plunger

pumps have been ordered to replace the centrifugal pumps now used, the latter being too expensive to operate. The new ones will all be installed in the near future.

## At the crushing plant a condenser

and cooling system has been installed and condensing systems for the concentrating mills will be put in this summer.

## To Build a Dam.

Dr. Ricketts and his assistants have been planning for some method to save the copper that escapes in the slims area. A portion of the area of the Overight, one of the largest ore deposits in the camp, carries considerable clay which makes slimes and

(Continued on Page Ten.)